

# Garrett Corp. Grows from 'Thin Air'

People in the aircraft industry have sometimes referred to J. C. Garrett, president of The Garrett Corporation, as "the man who created a successful business out of thin air."

While this does not adequately describe all the elements accounting for the rapid rise of his present organization in aviation, space, and industry, it does in some measure give a clue

## Church Observes Student Night

Guest speaker at services to be conducted at Narbonne Avenue Baptist church of Lomita at 8:30 and 11 a.m. Sunday, will be Rev. Floyd B. Caldwell, director of city missions in the South Bay Area of Los Angeles, former pastor of Pine Bluff, Arkansas.

The 7:30 p.m. service will observe the annual student night. College students will have charge of the program. Theme will be "My Mission to the Campus." High school seniors will comprise the choir for the service.

**CHANUKAH SERVICE**  
Congregation Ner Tamid, South Bay's conservative synagogue, will hold its second Chanukah service at 8:30 p.m. Friday at the Redondo Women's Club, 400 South Broadway, Redondo Beach.

Rabbi Bernard Wechsberg will discuss "Blessed Be Your Coming."

The Sisterhood will host the Oneg Shabbat in honor of new members of Ner Tamid.

Persons interested in membership are asked to contact Dr. Howard Berk, 377-2731.

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to the reason why Garrett has in 26 years become one of the top developers and manufacturers of aircraft, missile and space components and systems. Among other accomplishments, by which he built his company, he literally created a business which had never existed — a business of providing cabin air pressurization and atmosphere conditioning for aircraft, without which the high altitude, high speed jet flights common today would not be possible.

Garrett entered the aviation field out of college in 1927, spent nine years successively with embryo Lockheed, Northrop, and Douglas Aircraft Companies, then started his own firm. At Northrop and Douglas he had become proficient in the field of procurement of parts and tools often hard to locate in those early days of aircraft manufacturing. His new firm, which he called Garrett Supply Company, was organized in 1936 to provide both procurement and engineering services for most of Southern California's aircraft companies. It was an entirely original approach to the west coast aircraft procurement problem. Through it, Garrett was able to provide eastern manufacturers with accurate requirements for specialty tools needed by western aircraft builders, a special service heretofore not available to any western aircraft plant. Garrett Supply was a success from the start.

Somewhere along the line during his first three years on his own, working closely with leading aeronautical engineers and observing the evolution of the modern airplane, Garrett came to some strong personal conclusions

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about the future of flying.

It was apparent that transport airplanes would forever be limited to cruising altitudes no higher than the then current 10,000 feet, and little faster than the prevalent speeds of 189 to 200 miles per hour, until they were able in some manner to carry their own artificial atmosphere. He decided to do something about it.

It was conceded that a plane would be capable of flying much faster in higher, thinner air, but lack of atmospheric pressure and oxygen in this environment would make it uninhabitable to passengers and crew. Therein lay the problem.

In the military field, pilots were being provided with oxygen masks as means of survival when they had to fly higher than normal. But for obvious reasons, over the long pull in aviation there had to be another answer to survival at high altitudes. It appeared most doubtful that airline operators would ever subject passengers to lengthy transcontinental flights breathing through oxygen masks; a rather fantastic thought today.

By 1939 Garrett had become one of the industry's most ardent believers in the theory that the practical and permanent answer to the problem of high altitude flying was development of a pressurized, air conditioned airplane, capable of providing passengers and crew breathable atmosphere at all flyable altitudes.

This would mean that cabins must in future be specially constructed to withstand pressurization. They would also carry accessories and component systems to create the interior atmospheric conditions required to maintain, for instance, near-sea-level atmosphere at 10,000 feet or more. No practical plane had ever been built to withstand such pressure.

In the face of opposition in many quarters, to the effect that all this suggested "beefing up" of airplane cabins and addition of accessory machinery would impose too severe weight penalties and reduce payloads

too much, Garrett in 1939 set up his own organization in Los Angeles to actively pursue his belief in pressurized planes carrying their own atmosphere. He called it the Airesearch Manufacturing Company, now largest of seven divisions and two subsidiaries of The Garrett Corporation, whose total employment is now more than 10,000, and whose annual sales totalled \$225,000,000 in 1962.

Research was created to anticipate the needs of aviation against the time that high speed, high altitude flight would impose its problems. Garrett saw that time fast approaching, while others thought it years away.

As to the feasibility of pressurizing future transport aircraft he was not entirely alone in his convictions. Boeing Airplane Company and Lockheed had also begun to conduct experiments in this field. Boeing had developed an automatic cabin pressure regulator, one of several accessories necessary to maintain proper pressures for passenger comfort within an airplane.

By 1940, Boeing had completed the first pressurized airliner — known domestically as the Stratoliner. Airesearch made a not unimportant contribution to the successful operation of the system, an "aftercooler" to cool compressed air to proper temperature for passengers.

But it was a short-lived triumph for the devotees of pressurization, since production of this plane was halted almost before it could get well under way due to the demand of World War II.

However, Garrett had meanwhile secured from Boeing a license to develop its cabin pressure regulator for production. It was not long before his Airesearch Manufacturing Division, following acquisition of the regulator, had created and produced the only fully developed automatic cabin pressurization system for airlines in the United States.

Then came Garrett's first big opportunity to prove his theories and his newly developed pressurization system on a practical basis. During the progress of the

war the Air Force had commissioned Boeing to build a bomber which could fly to Japan over tremendously long distances — the B-29. To do the job it would have to fly at unusually high altitudes and high speeds. Therefore, it would have to be pressurized and its crew supplied with breathable atmosphere. The assignment was given to Garrett's Airesearch Manufacturing Division because it was ready to produce. The successful performance of the B-26 mission is history.

The Airesearch-equipped Boeing B-29, first production airplane to be pressurized, was a milestone in the history of aviation and a forerunner of things to come. All post-war airplanes were to be henceforth built for pressurization. Douglas, which had its unpressurized DC-4's ready for delivery to airlines as the war broke out, sold most of them to the Air Force for wartime duty as the C-54, then speedily developed its pressurized DC-6 airplane for post-war airline use. The Lockheed, Convair, Martin, and Boeing

airliners of the period were all built for pressurization and air conditioning, and Airesearch supplied almost all of the necessary accessories and component systems to do the job on these planes.

To Garrett it was a source of great satisfaction. Aircraft were now able to fly higher and faster, as he had predicted, because they were pressurized, and the sky was the limit. Today's planes, like the new Boeing 707 jet transport, are fully equipped with Airesearch products which can maintain a comfortable 5,000-foot altitude for passengers while the plane is flying 30,000 to 40,000 feet high. The Lockheed Electra in the project field is similarly equipped. Convair's 880 and 990 jets and the Douglas DC-8 also contain many Airesearch products to control passenger environment.

What of the future, as man ventures into outer space? Backed by long and intensive experience, Garrett has been awarded the ultimate in recognition in its field. Today it is the only company in its field of environmental control with products proven in actual space flight. Its Airesearch life support system has been a functional part of every venture into space yet made by the Project Mercury manned space capsules, including the most recent three-orbit trips around the world. Success with Mercury recently won for Garrett-Airesearch the contract from McDonnell Aircraft for environmental control equipment for NASA's new Project Gemini, involving a

two-man spacecraft designed to orbit the earth for two weeks.

The prime contract for development and production of the Project Apollo vehicle, awarded to North American Aviation, Inc., specifies Garrett-Airesearch as supplier of the Apollo life support system. It is being designed to sustain three astronauts on a two-week trip to the moon and back. The implications of this order are obviously tremendous.

These are tremendous challenges to Garrett engineers, who are meeting them in the same manner that challenges in this field were met over 20 years ago, when aviation was young and the flame of imagination burned brightly into the future.

When the time comes for space ships to travel on the interplanetary highroads of the universe, Cliff Garrett will have Airesearch products aboard as vital contributors to the operation.

## Chas. R. DeGross

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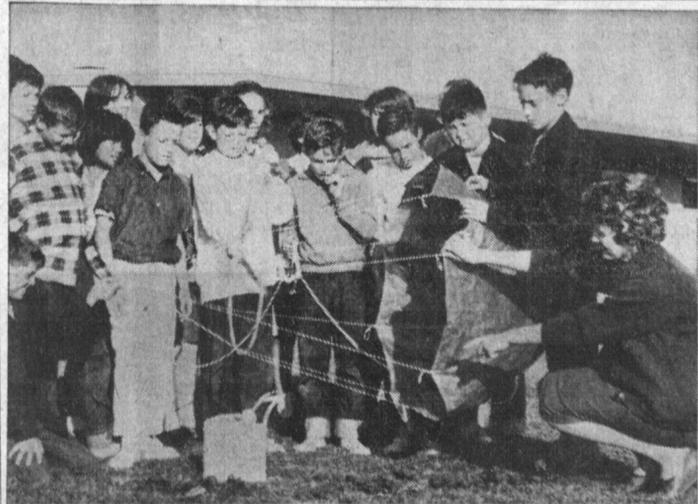
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seventh grade teacher, said special weather science unit will utilize device for extra study. Data desired by Weather Bureau was forwarded, school officials said.



# without a



# You Need Both

If you've ever tried eating a meal with only a knife, you know why a fork is so important...why you need both. Just as you don't handicap yourself when eating, don't handicap yourself in handling money by using the services of only one financial institution. To get the most out of your money, you need a bank checking account to pay monthly bills; together with a high profit savings account at Glendale Federal. At Glendale Federal Savings, your money earns over 35% more than a commercial bank pays on comparable savings accounts, comparably insured. So, for a checking account, use any bank...for savings, Glendale Federal.



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